

WHAT IS CLAIMED IS:

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1. A multicast distribution system for transmitting and receiving a packet(s), said multicast distribution system comprising:

5 at least one router connected with a cable;
at least one node connected to each of said routers; and
a relay unit provided either in said router or in said node which relay unit relaying a packet having a list of a plurality of destination addresses and its undistributed bit
10 map, to the packet header to be transferred according to the unicast route.

2. The multicast distribution system of packet according to claim 1, wherein in the case of distributing a same packet to
15 a plurality of destinations, when transmitting a list of destination addresses and undistributed bit map by storing in a packet header, said node inspects the packet transmitted by itself and reaching the own interface, and accepts when the own node is included in the destination list.

20 3. The multicast distribution system of packet according to claim 1, further comprising a transmitter which transmits a list of destination addresses and undistributed bit map by storing in a packet header, in the case of distributing a same packet
25 to the plurality of destinations,

wherein said router, when the transmitter relays the packet transmitted together with a branching regularity mark, searches a route table about two nodes at both ends of a row not distributed in the undistributed bit mat, and omits route search about other address when branching is not necessary, and searches the route table about all destinations only when branching is necessary.

4. The multicast distribution system of packet according to claim 1, wherein when branching the packet, the address distributed already is changing into a value which is meaningless as an address and then the packet is distributed.

5. A node provided in a multicast distribution system for transmitting and receiving a packet(s), said node comprising:
a list of destination addresses;
an undistributed bit map; and
a transmitter transmitting said list and said bit map by storing them in a packet header.

6. A router provided in a multicast distribution system, having a node which transmits a list of destination addresses and an undistributed bit map, for transmitting and receiving a packet(s), said router comprising:

receiving means for receiving a packet transmitted with

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